

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-17 (canceled)

Claim 18 (new): An information exchange apparatus comprising:

a TV receiver;

a TV receiver remote controller including a communication information storage unit configured to store communication information for the TV receiver, a communication information transmitter to transmit the communication information of the storage unit, and a transmission indicator operated for transmitting the communication information from the communication information transmitter; and

a video tape recorder including a communication information receiver to receive a signal from the remote controller and a communication information storage unit configured to store the communication information for the TV receiver which is included in the received signal.

Claim 19 (new): The apparatus according to claim 18, wherein the TV receiver has a function of registering the communication information of the video tape recorder, and the video tape recorder includes a transmitter to transmit a video/audio signal to a communication address of the TV receiver using the communication information stored in the storage unit.

Claim 20 (new): The apparatus according to claim 18, wherein the TV receiver and the video tape recorder as a first video tape recorder are connected to a second video tape recorder, and the TV receiver, the first video tape recorder and the second video tape recorder inform each other of the communication information to register the communication information.

Claim 21 (new): The apparatus according to claim 20, wherein:

the first video tape recorder transmits its communication information to the TV receiver via a remote controller of the first video tape recorder to register in the communication information storage unit of the TV receiver;

the second video tape recorder transmits its communication information to the TV receiver via a remote controller of the second video tape recorder to register in the communication information storage unit of the TV receiver;

the TV receiver encrypts the communication information of the second video tape recorder, which is stored in its own communication information storage unit, with a public key of the first video tape recorder and transmits the encrypted communication information to a communication address of the first video tape recorder; and

the TV receiver encrypts the communication information of the first video tape recorder, which is stored in its own communication information storage unit, with a public key of the second video tape recorder, and transmits the encrypted communication information of the first video tape recorder to a communication address of the second video tape recorder.

Claim 22 (new): The apparatus according to claim 20, wherein:

the TV receiver transmits its communication information to the first video tape recorder from the TV receiver remote controller, and stores in the communication information storage unit of the first video tape recorder;

the first video tape recorder uses a public key of the communication information of the TV receiver stored in its own communication information storage unit to encrypt its own communication information, and transmits the encrypted information to the communication address of the TV receiver;

the TV receiver transmits its communication information to the second video tape recorder from the TV receiver remote controller, and stores in the communication information storage unit of the second video tape recorder; and

the second video tape recorder uses a public key of the communication information of the TV receiver stored in its own communication information storage unit to encrypt its own communication information, and transmits the encrypted information to the communication address of the TV receiver.

the TV receiver uses a public key of the communication information of the first video tape recorder stored in its own communication information storage unit to encrypt the communication information of the second video tape recorder, and transmits the encrypted information to the communication address of the first video tape recorder; and

the TV receiver uses a public key of the communication information of the second video tape recorder stored in its own communication information storage unit to encrypt the communication information of the first video tape recorder, and transmits the encrypted information to the communication address of the second video tape recorder.

Claim 23 (new): An information exchange apparatus comprising:

a video tape recorder located in a first room;

a first TV receiver located in the first room and connected to the video tape recorder to view a reproduced video of the video tape recorder;

a second TV receiver located in a second room;

a remote controller located in the second room and storing communication information of the TV receiver; and

a portable terminal registering communication information of the remote controller and the video tape recorder,

wherein when the communication information of the remote controller and the second TV receiver is propagated to the video tape recorder, and the communication information of the video tape recorder and the portable terminal is propagated to the remote controller, the remote controller communicates with the video tape recorder, the video tape recorder communicates with the second TV receiver, and the video tape recorder is operated with the remote controller to view a video of the video tape recorder with the second TV receiver.

Claim 24 (new): The apparatus according to claim 23, wherein

the remote controller transmits its communication information to the portable terminal from the remote controller;

the portable terminal transmits its communication information to the remote controller from the portable terminal;

the remote controller propagates the storing communication information of the second TV receiver to the portable terminal;

the portable terminal informs the remote controller of the communication information by using only the information concerning an apparatus function;

the remote controller sets the video tape recorder to the first TV receiver;

the remote controller transmits a video tape recorder control command to a communication address of the portable terminal via the transmitter;

the portable terminal transmits the control command to the video tape recorder; and

the video tape recorder transmits a video/audio signal to the TV receiver.